

Unit 4

Day 2

Multiplying Polynomials

1) $(2a-b)(2a+b)$

$$4a^2 - b^2$$

2) $(7x+2y)^2$

$$49x^2 + 28xy + 4y^2$$

3)

$$[(2y+1)+3][(2y+1)-3]$$

$$(2y+1)^2 - 9$$

$$4y^2 + 4y + 1 - 9$$

$$4y^2 + 4y - 8$$

4) $[(2y+1)-3][(2y+1)-3]$

$$[(2y+1)-3]^2$$

$$(2y+1)^2 - 6(2y+1) + 9$$

$$4y^2 + 4y + 1 - 12y - 6 + 9$$

$$4y^2 - 8y + 4$$

$$4(y^2 - 2y + 1)$$

~~times~~
not needed

5)

$$(3x - y)(2x + 2y)$$

$$6x^2 + \cancel{6xy} - 2xy - 2y^2$$

$$6x^2 + 4xy - 2y^2$$

6)

$$2(x^2 - 2x + 3) - 4(2x^2 - x + 8)$$

$$2x^2 - 4x + 6 - 8x^2 + 4x - 32$$

$$\boxed{-6x^2 - 26}$$

$$-2(3x^2 + 13)$$

7)

$$x^{1/5} (x^{4/5} + x^{9/5})$$

$$x^{5/5} + x^{10/5}$$

$$x + x^2$$

8)

$$(y - y^{1/2})(y + y^{1/2})$$

$$y^2 + y^{3/2} - y^{3/2} - y$$

$y^2 - y$

$$- y^{1/2} \cdot y = - y^{1/2 + 1/2} = - y^{3/2}$$

9)

$$(x^{1/2} - x^{-1/2})^2$$

$$x - 2(x^{\frac{1}{2}}) + x^{-1}$$

$$x - 2 + x^{-1}$$

$$\boxed{x - 2 + \frac{1}{x}}$$

HOMEWORK:

Unit 4 Day 2